

Abstract

A pasteurization arrangement employs regeneration to bring raw milk or other liquid food product up to a few degrees below a UHT pasteurizing temperature. The product is first heated up by regeneration to about 175° F, and held at this temperature for about sixty seconds to denaturize proteins so that they do not deposit on the heat exchange walls of following stages. Then the product proceeds through a product-product regenerative heat exchanger where it emerges at about 264° and proceeds to a water-product heater to heat the product to 280° F. The water flows in counter current to the product. The temperature differential at any reference point in the heater and the regenerative heat exchanger is below 20°, and the ratio of rate of water flow to product flow in the heater is below about 3:1.